

Energy Management Services Division

March 13, 2003

Semi-Annual Update to the Energy Management Services Plan

Background

Over the last three decades, in numerous City resolutions and ordinances, conservation has been established as the first choice resource to meet the energy requirements of Seattle City Light (City Light). On behalf of the utility, the Energy Management Services Division (EMSD) carries out this policy direction by developing and operating conservation programs to increase the efficiency of electricity use in Seattle homes, businesses, and industries.

In the 2000 Strategic Resource Assessment (SRA), City Light established the goal of meeting all load growth through 2011 with conservation and renewable resources. This goal was more recently reconfirmed in the 2002 update to the SRA. To meet this goal, City Light set a target for EMSD to achieve 9 aMW per year through its conservation programs.

BPA Conservation Funding

Since 1996, City Light has financed program energy savings without any substantial funding from the Bonneville Power Administration (BPA). In early 2002, City Light signed a two-year Conservation Augmentation (Con-Aug) Agreement with BPA under which BPA pays 16.9¢/kwh for first year energy savings from the utilities' conservation programs. This agreement spans BPA's fiscal years 2002 and 2003 (10/01/01 thru 09/30/03). City Light's goal under the Con-Aug agreement is also 9 aMW per year of energy savings from completed projects or installed measures.

2002 Energy Savings

In the first year of the Con-Aug agreement (Oct 1, 2001 to Sep 30, 2002), City Light achieved BPA's goal 9aMW goal. Through the first quarter of the second year of the agreement (Sep 30, 2002 to Dec 31, 2002), City Light has already realized 46% of the 9 aMW goal. As a result of these accomplishments, the utility has secured \$16.6 million in funding from BPA during 2002, and expects to secure an additional \$10 million in 2003 under the current agreement.

The table on the next page summarizes EMSD's progress in meeting energy savings goals under the Con-Aug agreement.

Completed Energy Savings under Con-Aug Agreement

1st Year (10/01/01 to 09/30/02)	Goal (aMW)	Accomplished (aMW)	% of Goal Achieved
Commercial & Industrial	7.1	7.1	100%
Residential & Small Commercial	1.9	1.9	100%
Total Savings	9.0	9.0	100%
2nd Year (to date) (10/01/02 to 12/31/02)	Goal (aMW)	Accomplished (aMW)	% of Goal Achieved
Commercial & Industrial	7.1	0.8	43%
Residential & Small Commercial	1.9	3.4	47%
Total Period Savings	9.0	4.1	46%

Program Achievements

Below are the major accomplishment achieved by EMSD staff in 2002.

Community Conservation

..... Energy Savings

For the four quarters of the 2002 BPA fiscal year, Community Conservation programs resulted in completions totaling 1.9 aMW of energy savings, or 100 % of the annual goal of 1.9 aMW. For the fourth quarter of 2002 – the first quarter of BPA's 2003 fiscal year – the section completed an additional 0.77 aMW, or 43% of its 1.8 aMW 2003 BPA goal. For the 2002 calendar year, new contract activity remained strong and Community Conservation achieved 2.2 aMW of newly contracted projects. This represents 116% of the annual goal of 1.9 aMW for newly contracted projects.

..... Multifamily and Small Commercial

Community Conservation continued to serve the multifamily residential sector in both new construction and retrofit of existing apartments and condominiums. The Built Smart Program, City Light's beat-the-code program, contracted with an additional 1,823 units of residential new construction during 2002, reflecting a continued historically high level of activity in this sector. Financial incentives for efficient lighting were provided to projects totaling another 997 units. The Built Smart for Affordable Housing program, which targets low-income housing being developed by non-profit low-income housing developers and governmental agencies, contracted for service to an additional 513 units. City Light's two multifamily retrofit programs, Multifamily Weatherization and Common

Area Lighting, contracted to serve an additional 1,887 units of existing multifamily buildings with the installation of new windows, insulation, or efficient lighting

The Smart Business program continued to provide lighting retrofits to a wide variety of small businesses, both through the city-wide and Neighborhood Power Project (NPP) components, with the NPP component active in the Greenwood neighborhood. A total of 165 small businesses participated in this program during 2002.

.....Lighting and Appliances

Water Heater Rebate Program

The Water Heater Rebate Program (WHRP) ended as of July 31, 2002. For the year, 2,042 rebates were issued. The program phase-out went very smoothly. WHRP was a very effective program during its ten-year history, providing rebates for over 45,000 efficient water heaters and delivering cumulative annual energy savings in 2001 of approximately 1.25 aMW. The program contributed valuable data in support of federal rulemaking that resulted in new federal efficiency standards equivalent to WHRP's requirements that will take effect in 2004. This limited remaining life of the program was one of the key reasons behind the decision to end it during 2002.

WashWise Program

The collaborative effort with SPU continues to achieve historically high levels of rebates, even with the combined rebate having been lowered from \$100 to \$75 during the first quarter of 2002. During October and November, City Light joined SPU in a special promotion that offered three levels of increased rebates for machines of various efficiencies. For the year, 4,817 rebates were processed for qualifying machines installed in City Light's service territory.

Torchiere Retail Coupon Program

A total of 1,103 coupons were redeemed under this BPA-funded program. All City Light customers were provided with a \$15-off coupon for Energy-Star labeled compact fluorescent-based torchiere floor lamps. The coupons were mailed to customers in their January/February bill and expired April 30th. These lamps are much more energy-efficient than halogen torchieres, and are also much safer since the bulbs create much less heat than halogens.

.....Neighborhood Power Project (NPP)

The Phinney/Greenwood NPP ended successfully with conservation workshops conducted at the Phinney Neighborhood Association Center and at the High Point housing development. NPP collaborated with the Phinney Neighborhood Association to coordinate the Clean Seattle Initiative in the Phinney/Greenwood area. The finale event held in late November was well attended.

With the help of over 186 volunteers, more than 7,100 compact fluorescent bulbs and 500 efficient showerheads and aerators were distributed in the neighborhood during 2002.

Fifteen residents received Green Audits. Annual energy savings from these efforts are estimated at over 600,000 kWhs.

..... Low Income

Regular Low-Income Conservation Programs

For 2002, the Office of Housing (OH) contracted for retrofit of 609 multifamily units, 102% of its annual 600-unit multifamily goal, and 66 single-family and multiplex units, 62% of its 106-unit goal in the HomeWise program.

Utility Tax Funds

Council Ordinance 120322, passed in April 2001, allocated \$1.1 million of utility B&O tax funds to additional energy conservation efforts targeted towards low-income housing providers and the facilities they operate. City Light and OH completed this work during 2002. OH completed common-area lighting retrofits in the buildings of 18 non-profit housing providers. City Light worked directly with King County Housing Authority and Seattle Housing Authority to have common area lighting replaced in 11 and 26 of their buildings respectively. In addition to the lighting retrofits, over 4,600 electric baseboard thermostats were replaced in buildings owned by six non-profit housing providers and SHA. Overall, the Utility Tax project resulted in energy savings of .29 aMW.

..... High Bill Audits

During 2002, Community Conservation staff provided home energy audits for some of the customers who have called City Light about their high bills. The audit service is limited to those customers who are referred by the Hearing Officer or Customer Service management. During the year, approximately 50 audits were conducted. Many of the customers who received audits called City Light because their winter consumption put them in the Third Tier and their bills were much higher than the previous year.

Commercial, Industrial, Municipal Conservation

..... Energy Savings

The primary focus of Commercial & Industrial (C/I) activity in 2002 was on completion of conservation projects that are eligible for BPA funds under the Con-Aug agreement. C/I programs achieved 7.1 aMW of completed energy savings or 100 % of annual goal for C/I customers under the first year of the Con-Aug agreement. In the second year of the agreement, C/I programs are well ahead of pace in meeting savings, securing almost 50% of the needed savings after a quarter of the year.

For the 2002 calendar year, new contract activity with C/I customers has somewhat lagged from previous years. This decrease in activity was due to the weak local economy and City Light decisions to keep several field positions vacant in response to City Light's financial situation.

.....Facility Assessment Audits

Facility Assessment (FA) audits contribute to marketing and project development by identifying and analyzing energy conservation opportunities customers may not recognize. To offset impacts from the budget decision to end consultant assistance for delivery of FA audits, staff have picked up most of the slack. At the end of the year, the C&I Section had completed 22 FA audits, exceeding the goal of 15 set for 2002

.....Municipal Conservation Activities

City of Seattle departments have experienced a number of challenges in pursuing energy efficiency projects:

- Exhaustion of the Municipal Conservation Fund administered by OSE.
- Higher rates following the 2001 energy crisis.
- Cutbacks in budget and staffing due to reduced General Fund revenues

Because of these factors, the EEP asked City Light conservation staff to pursue avenues to provide additional support for hard-hit City departments in order to reduce bills and improve operations. In response to this request, City Light has undertaken the following:

- Created a four-person Public Sector Team in the C&I conservation group that is focusing on conservation assistance to governmental organizations. The targeted customers for this team include the City of Seattle, suburban cities, King County, State of Washington, the Federal government, and public schools.
- Proactively contacting public sector facility management staff (especially within the City of Seattle) to provide briefings on conservation services, including free facility assessments, technical assistance, and financial incentives for retrofit projects and new construction.
- Continuing to actively promote energy efficiency in public buildings in the design and construction stages; providing financial assistance for energy analysis of promising conservation measures; and, participating in the City's Green Building Team.
- Based on recommendation from OSE staff, targeted the Parks Department as the best "untapped" conservation potential among City departments. We have contracted for lighting upgrade for the Seattle Tennis Center as a "toe in the door" for additional conservation partnerships and are working closely with Parks Department staff to identify and prioritize additional conservation projects for 2003 and beyond.

Sustainability

Encouraging sustainable building in private sector development continues to be a goal of the Seattle City government. EMSD has assumed a major role in promoting these activities over the last few years through (1) sponsorship of the Northwest Regional Sustainable Building Action Plan in 1997, (2) development and sponsorship of the two year old Sustainable Building Professional Certificate Program, (3) completion of the Sustainable Demand Project grant in 2000 and early 2001, and (4) continuing participation in the City's Green Building Team. Major achievements in 2002 include:

LEED™ Pilot Incentive Program

Jointly funded by City Light and SPU, EMSD developed this incentive program to financially assist private sector projects to become LEED™ certified. Funding is provided early in the conceptual and design stages to facilitate establishing sustainable building goals into overall project goals. At years end, six projects had been funded and four projects have submitted Pre-Applications which have been approved by the City's Green Building Team.

LEED™ Renewable Energy Credit

The United States Green Building Council approved a credit interpretation submitted by EMSD that would allow City Light customers (and in particular LEED™ projects) to purchase 50% of their electrical energy needs from renewable sources.

BUILT GREEN™ Incentive Program

EMSD worked with the Master Builder's Association of King and Snohomish Counties to develop a benchmarking incentive based on their Built Green™ multi-family checklist as a complement to the LEED™ Incentive. The Built Green™ Incentive program was launched in July, 2002. At years end one project has been funded and two projects have submitted Pre-Applications that have been approved by the City's Green Building Team.

Support of Sustainable Neighborhoods

EMSD has taken the lead in Citywide collaborative efforts to encourage sustainably developed neighborhoods in the South Lake Union and High Point neighborhoods. Beyond supporting neighborhood sustainability goals, each neighborhood is being encouraged to use benchmarking tools – LEED™ and Built Green™ - as measures of performance.

Sustainable Building Professional Certificate Program

This highly successful program began its fourth year in October. Classes are offered at Seattle Community College in a one weekend a month, nine-month session. Enrollment has generally filled quickly and other jurisdictions are interested in adopting this curricula for their own use.

Green Power

City Ordinance 120623 and Resolution 30420 established the Seattle Green Power Program. In fulfillment of this program, EMSD plans and develops solar photovoltaic (PV) demonstration projects at Seattle Public Schools and other public facilities to promote increased customer understanding and transformation of the local market for green power.

.....Achievements

The Green Power Program achieved its goal for customer participation in 2002. Performance is further summarized in the table below.

Green Power Achievements in 2002

2002 Green Power Statistics	Q1	Q2	Q3	Q4
Number of participants:				
• Recurring payment signups	2,160	2,400	3,000	3,100
• Single payment	240	300	400	400
Total	2,400	2,700	3,400	3,500
% of Total Customers (350,000)	0.7%	0.8%	1.0%	1.0%
Revenue collected	\$8,350	\$40,000	\$92,000	\$138,000
Projects installed (to date)	0	0	1	2
Solar capacity (kW-DC)			1.1	2.2
Installation expenditures (to date)			\$13,284*	\$21,704**
kWh generated	0	0	0	120***

* Equipment costs for Greenwood and Orca (excluding installation and permitting; not yet determined)

** Cumulative equipment costs, including Washington—not yet installed (excluding installation and permitting; not yet determined)

*** Greenwood began generating on October 14, 2002.

.....Green Power Highlights

During the 4th Quarter of 2002, projects were completed at Greenwood Elementary School and Orca at Columbia Elementary School in cooperation with the Seattle School District and Western SUN.

In addition, EMSD coordinated the installation and interconnection of solar equipment at Pathfinder Elementary School in West Seattle though not funded through the Seattle Green Power Program.

A significant commercial account signed up for the program in Kinko's with all 10 stores served by City Light participating.

A Green Power newsletter was developed in late 2002 for distribution to all program participants in early 2003. Extra copies will be used for continued marketing efforts.

Current solar projects in the pipeline include:

- Washington Middle School
- Carkeek Park Environmental Education Center
- Woodland Park Zoo
- Bradner Gardens Park Community Utility Building
- Ballard High School

Lighting Design Lab

During 2002 the Lighting Design Lab ("LDL") received 3,000 visitors. The LDL website received over 260,000 hits. The LDL staff conducted a total of 95 classes with the majority being off-site classes around the region. There were 312 commercial consultations for customers around the region. Among City Light commercial consultations in 2002 were Airborne Express, Benaroya Hall, Fred Hutchinson Cancer Research Center, Group Health Cooperative (IT Center), PCC Natural Markets, and Regence BlueShield.

2002 AWARDS

Energizing America's Cities Award

Gas Technology Institute / International Competition for Sustainable Urban System Design

Innovation in Marketing / "Pitching in to Save" Campaign w/ Seattle Mariners

Energy Services Professionals International

Global Warming Award

2002 International Climate Protection Award / Environmental Protection Agency

Exemplary Programs

American Council for an Energy Efficient Economy